

Application Serial No. 10/662,485
Response to Office Action of 22 Dec 2004

REMARKS

Claim status

Claims 1-40 were pending in the case at the time of the Office Action. Of these, all claims are presently rejected on at least one basis as indicated below. The independent claims are 1, 15, 27 and 36. All pending claims have been examined. Claim 21 is amended above, in a non-narrowing manner.

Information Disclosure Statement

The applicant's record shows that an Information Disclosure Statement has been submitted with the application, and the Office Action acknowledges review of the IDS by the Examiner.

Claim objections – 35 USC §112

The Examiner has objected to claim 21 as not ending with a period. Correction is made above. No narrowing amendments are made for purposes of patentability in this response.

Claim rejections under 35 U.S.C. §102(b)

The Examiner has rejected claims 1, 2, 5, 7, 15-18, 22-25, 27-29, 33, 34, 36, 37 and 39 under 35 U.S.C. §102(e) as being anticipated by US Pat. 6,686,851 to Gordon ("Gordon '851"). Applicants respectfully traverse. The independent claims (1, 15, 27 and 36) will be addressed separately.

As a preliminary note, it seems that the Examiner may have misunderstood the language of the claims. The Examiner seems to have focused his claim analysis on a difference in scales between the "electronic tape" presentation of the data and the enlarged "window" presentation of current data at the center of each tape range. The window display is enlarged, but the spacing is clearly linear within the window. However, each electronic tape has a nonlinear spacing as one moves from the center of the tape to the respective ends thereof. Each of the independent claims requires that the electronic tape have a nonlinear scale. As will be demonstrated, Gordon '851 is devoid of this feature and actually teaches linear spacing in the electronic tapes.

Claim 1

Application Serial No. 10/662,485
Response to Office Action of 22 Dec 2004

To quote the Examiner, "the electronic display for presenting airspeed data of an aircraft taught by Gordon includes the following claimed subject matter, as noted: 1) the claimed electronic airspeed tape having a nonlinear scale is met by the airspeed Indicator (No. 28) having a nonlinear scale seen in Figures 2 and 11, wherein the hidden numbers 1 and 9 help to emulate the view of a mechanical drum gauge, and scrolling of the airspeed tape maintains the scale on the display." This analysis of Gordon '851 is simply unsupported by the content of the issued patent.

The applicants respectfully note that the primary subject matter of Gordon '851 is altitude indication, not airspeed indication. Note the title, for example. The applicants agree that the airspeed indicator is shown as reference number 28 and that scrolling of the airspeed tape maintains the scale on the display, but they agree with little else of the Examiner's analysis. Figures 2 and 11 do not show a nonlinear display as would result from the two-dimensional projection of a three-dimensional cylindrical drum display having linear markings around its circumference, contrary to the Examiner's statements. The Gordon '851 specification makes very little mention of airspeed indicator 28, focusing primarily on aspects of altitude indicator 30. With respect to the description of Figs. 3-11, which show details of the altitude indicator, the hash or tic marks 46 "indicate intervals of 100 feet" (Col 3, line 57). Gordon '851 states that, "for the sake of clarity" (Col 3, line 53), these tic marks are "positioned evenly between numbers 44 to subdivide the altitude intervals" (Col 3, line 54-55). In other words, a nonlinear depiction, as would be required to emulate the view of a mechanical drum gauge, is not even used in the altitude indicator.

The Examiner's reference to "hidden numbers 1 and 9" is not understood, and the Gordon '851 specification mentions nothing about "hidden numbers." If the Examiner means the partial "1" and partial "9" displayed above and below, respectively, the "0" of "220" in the airspeed window shown in Fig. 2, the applicants respectfully assert that these are linearly spaced from the "220" and do absolutely nothing to "emulate the view of a mechanical drum gauge." Also, claim 1 is directed at the airspeed tape, not the enlarged window. The Examiner

Application Serial No. 10/662,485
Response to Office Action of 22 Dec 2004

is asked to compare what is shown in Fig. 1 of the present application with the content of Gordon '851. The Examiner's attention is particularly directed to the vertical spacing of tick marks 20, 22 in Fig. 1 of the present application. An informal measurement taken from Fig.1 shows that when the airspeed is about 130 knots, a difference of airspeed from 120 to 110 knots is represented by a vertical distance of about 11 mm. But the same differential of 10 knots is represented by a vertical distance of only about 6 mm when the difference between 80 and 70 knots is measured. This is the nonlinearity described and claimed by the applicants. Gordon '851 is devoid of this feature.

Accordingly, claim 1 is not anticipated by Gordon '851 or even rendered obvious, as Gordon '851 teaches a linear display of airspeed data. As a result, claim 1 and its dependent claims 2-14 are all considered allowable.

Claim 15

Again quoting the Examiner, "the electronic display for presenting altitude data of an aircraft taught by Gordon includes the following claimed subject matter, as noted: 1) the claimed electronic altitude tape having a nonlinear scale is met by the altitude display area (No. 30) having an altitude indicator (No. 32), wherein the numbers 20 and 80 help to emulate the view of a mechanical drum gauge, and wherein a scroll of the airspeed tape maintains the altitude indicator on the display." This analysis of Gordon '851 is simply unsupported by the content of the issued patent.

Unlike the situation encountered with regard to claim 1, the primary subject matter of Gordon '851 is altitude indication, so reference to Gordon '851 Figs. 3-11 is directly on point. The applicants agree that the altitude indicator of Gordon '851 is shown as reference number 32 in altitude display area 30 and that scroll of the altitude tape maintains the altitude indicator on the display, but they agree with little else of the Examiner's analysis. With respect to the description of Figs. 3-11, which show details of the altitude indicator, the hash or tic marks 46 "indicate intervals of 100 feet" (Col 3, line 57). Gordon '851 states that, "for the sake of clarity" (Col 3, line 53), the tic marks are "positioned evenly between numbers 44 to subdivide the altitude intervals" (Col 3, line 54-55). In

Application Serial No. 10/662,485
Response to Office Action of 22 Dec 2004

other words, a nonlinear depiction, as would be required to emulate the view of a mechanical drum gauge, is not used.

The Examiner's reference to "the numbers 20 and 80" is understood as a reference to the magnified portion overall altitude display. The Examiner is asked to compare what is shown in Fig. 2 of the present application with the content of Gordon '851, especially Figs. 3-11. As described in paragraph [0016] of the specification as filed, the altitude tape 38 of the present invention is "nonlinear." Gordon '851 is devoid of this feature.

Accordingly, claim 15 is not anticipated by Gordon '851 or even rendered obvious, as Gordon '851 teaches a linear display of altitude data. As a result, claim 15 and its dependent claims 16-26 are all considered allowable.

Claim 27

Claim 27 relates to the heading indicator of the present invention. Again quoting the Examiner, "the electronic display for presenting heading data of an aircraft taught by Gordon includes the following claimed subject matter, as noted: 1) the claimed electronic heading tape having a nonlinear scale is met by the heading indicator (No. 24) wherein the nonlinear scale seen centered in Fig. 2 emulates the view of a mechanical drum gauge, and wherein a scroll of the electronic heading tape maintains the nonlinear scale on the display." This analysis of Gordon '851 is simply unsupported by the content of the issued patent.

The Examiner's characterization of Gordon '851 is simply wrong. Heading indicator 24 in Gordon '851 does not even show the same type of heading indicator taught by the applicants. Heading indicator 24 is an arc portion of a circular heading dial, with directional markings quite linearly presented about the circumference thereof. It is not the nonlinear display that would be the two-dimensional projection of a three-dimensional cylindrical drum display having linear markings around its circumference, contrary to the Examiner's statements. The Gordon '851 specification makes only cursory reference to heading indicator 24.

Application Serial No. 10/662,485
Response to Office Action of 22 Dec 2004

Accordingly, claim 27 is not anticipated by Gordon '851 or even rendered obvious, as Gordon '851 teaches a linear display of heading data. As a result, claim 27 and its dependent claims 28-35 are all considered allowable.

Claim 36

Claim 36 relates to a display comprising an electronic tape having a nonlinear scale. Quoting the Examiner, "the electronic display for presenting data of an aircraft taught by Gordon includes several electronic tapes having nonlinear scales as seen in Figures 2 and 11, wherein the nonlinear scale emulates the view of a mechanical drum gauge, wherein a scroll of the tape maintains the scale on the display." This analysis of Gordon '851 is simply unsupported by the content of the issued patent.

The applicants have already addressed the linearity of the airspeed, altitude and heading indicators taught in Gordon '851 above, with regard to claims 1, 15 and 27. The Examiner has not shown a nonlinear electronic tape in either Fig. 2 or 11 of Gordon '851.

Accordingly, claim 36 is not anticipated by Gordon '851 or even rendered obvious, as Gordon '851 teaches a linear display of all displayed data. As a result, claim 36 and its dependent claims 37-40 are all considered allowable.

Claim rejections under 35 U.S.C. §103

The Examiner has rejected claims 3, 4, 8-14, 26, 35 and 40 under 35 USC §103(a) as obvious over the combination of Gordon '851 standing alone.

The Examiner has also rejected claims 6, 32 and 38 under 35 USC §103(a) as obvious over the combination of Gordon '851 and US Pat. 4,860,007 to Konicke ("Konicke '007").

The Examiner has also rejected claims 19-21, 30 and 31 under 35 USC §103(a) as obvious over the combination of Gordon '851 and US Pat. 6,112,141 to Briffe ("Briffe '141").

Applicants address all of these obviousness rejections by pointing out that Gordon '851 does not teach each and every limitation of the independent claims from which these claims depend. The missing limitations are not found in the

Application Serial No. 10/662,485
Response to Office Action of 22 Dec 2004

other cited references. As proper dependent claims, all of the claims rejected as being obvious are allowable over the cited prior art.

Conclusion

Claims 1-40 are pending in the present application. The applicants thank the Examiner for the careful claim-by-claim analysis provided in the claim rejections, as the detail provided allowed the applicants to understand the nature of the Examiner's arguments, although the applicants do not agree with those arguments.

The applicants respectfully submit that the claims are now in condition for allowance and such action is earnestly requested.

Respectfully submitted,

Dated: 27 JAN 2005

By: 

Stephen L. Grant
Registration No. 33,390
Standley Law Group LLP
495 Metro Place South, Suite 210
Dublin, Ohio 43017-5315
Telephone: (614) 792-5555
Facsimile: (614) 792-5536